



Experimental biofuel governance: Historicizing social certification in Brazilian ethanol production



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ABSTRACT

Amid debates questioning the social sustainability of ethanol, Brazilian industrialists sought an exportable social verification that could accompany sugarcane ethanol technology transfers to global South countries. Despite an effective national anti-slave labor pact and marketing campaigns promoting the sustainability of ethanol, in 2008, members of the federal government orchestrated a series of meetings between representatives from the state, sugarcane industry, and national labor organizations to discuss labor practices. They created “The National Commitment to Labor Conditions in Sugarcane Activity,” a voluntary certification program that they hoped would attest to fair working conditions on plantations and provide acknowledgment for participating businesses. After reports revealed gross violations of labor practices on complying plantations, the certificate was abandoned in 2013.

In this paper, I trace the conditions that enabled this certificate to emerge and then fail as a state-sanctioned instrument for governing social justice in the Brazilian ethanol industry. I contend that understanding the emergence of neoliberal governance schemes requires analysis of the historical relationships that intersect with new geopolitical formations. In this case, the state engaged in an experimental form of governance in attempts to export a social certificate alongside technology transfers. This led to the conversion of rights into privileges with no official means for punishing non-complying companies, causing the certificate to lack efficacy and fail. I argue this by connecting the intersecting histories of labor unions, the ethanol industry, and the state to the contemporary factors that led to the need for a mechanism to attest to social sustainability.

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1. Introduction

In the early 2000s, the Brazilian government faced criticism domestically and internationally for several aspects of its national biofuel policy and practices. Foremost among these critiques were challenges to scientific reports extolling the virtues of ethanol as an economically and environmentally sustainable fuel and allegations that the labor practices required for sugarcane ethanol production were unjust, exploitative, and socially unsustainable. Together with the sugarcane industry, the government responded with a two-pronged campaign to prove scientifically that greenhouse gas (GHG) emissions were reduced from sugarcane ethanol production and use, and to create and publicize alliances between sugarcane industry representatives and national social justice

organizations to ameliorate negative perceptions of the labor conditions during sugarcane harvesting.

The office of the Secretary General of the President of Brazil¹ orchestrated a series of meetings between industry representatives, labor organizations, and governmental departments. The resulting pact, called the National Commitment to Labor Conditions in Sugarcane Activity (henceforth, National Commitment), went into effect in June 2009. The National Commitment was a voluntary “social certificate” intended to encourage Brazilian plantation owners to implement specific labor practices through the receipt of a publicized compliance certificate verified through industry-funded audits by external firms. Modeled on international biofuel sustainability certification programs that use industry-funded audits to govern the environmental and social impacts of biofuel production outside of governmental standards, such as the Roundtable on Sustainable

¹ Henceforth “Secretary General.” The primary duty of this unique Brazilian office is to assist the President in coordinating and implementing activities between government and social organizations as well as between the public and private sectors. The office is headed by a presidentially appointed minister.

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Biofuels (RSB) and Bonsucro,² the National Commitment uniquely incorporated input from representatives of government and several labor organizations into the creation and implementation of this industry-funded initiative through a “Dialogue Table.” The certificate’s stated objectives were to ensure fair labor conditions for workers and provide public acknowledgment for participating businesses.

The National Commitment lasted almost four years. In April 2013, when the terms of the certificate were set to expire, the National Commitment was not renewed by the federal government, and the project was quietly abandoned. From the start, radical social organizations challenged the certificate for excluding key labor issues, such as the provision of meals to workers. In 2012, the national newspaper *O Globo* reported dozens of cases of labor violations at allegedly compliant plantations, and the Ministry of Labor found at least 60 of the 169 businesses had “irregularities in labor relations” (Rodrigues, 2012). In 2013, the activist organization *Repórter Brasil* reported that the certificate had been granted to blatantly non-conforming plantations and to businesses on the Ministry of Labor’s “Dirty List” of companies that use “slave labor” practices (see next section) (Hashizume, 2013). The Ministry of Labor filed seven civil lawsuits against “certified” companies, citing various “problems, failures, mistakes, and frauds” over the course of the certificate’s tenure. The Secretary General’s office made no announcement concerning its cancellation. It simply told *Repórter Brasil* that “the agreement was not continued because it lost validity (*perdeu a vigência*),” and amended the heading of the online database of complying companies to state in bold red letters that the list was “valid until April 30, 2013” (Secretaria-Geral, 2013).

Mitchell (2011) has described industrialized “carbon democracies” that rely upon the energy derived from oil to maintain the political, social, and economic forms they have built from its use, and a similar case might be made for Brazil. Using biofuel governance mechanisms (Hunsberger et al., 2014) Brazil has developed one of the most successful ethanol industries in the world. Extensive subsidies and financial support for land, infrastructure, technology, and ethanol research and development, as well as high domestic blend mandates and international promotion of biofuel production and consumption have resulted in (1) the continued strength of a sugarcane industry that supports GDP growth—an endeavor that dates back to Brazil’s colonial origins; (2) a thriving domestic automobile industry that developed flex-fuel cars, resulting in a degree of fuel autonomy and a highly mobile population; (3) multiple generations of scientific and technological biofuel innovators who contribute to a lively scientific community and keep “intellectual capital” in the country; (4) a position for both the Brazilian government and ethanol corporations as “biofuel experts” in environmental, energy, and social sustainability, increasing their international influence and level of inclusion in global affairs; and (5) the ability to forge South–South agriculture-energy alliances, where new markets are created for energy and social technologies.

As scientists and technologists strive to overcome the limits imposed by fossil fuels through alternative fuel technologies, Brazil is positioned as an economic and environmental leader. Despite the existence of the National Pact for the Eradication of Slave Labor

in Brazil, an effective, market-driven agreement between the various industries and the Ministry of Labor (discussed below), the ethanol industry and members of the federal government’s executive branch sought an exportable biofuel governance mechanism to accompany production technologies overseas, one that would include the “voices” of both industry and social justice organizations as it eliminated the vigilance of the state in favor of independent auditors.

The creators of the National Commitment social certificate hoped that it would diffuse internationally along with the production technologies and practices for which it was meant to attest. Certificates incentivize the internalization of environmental and social limits, thus accommodating economic-political ideals that eliminate state regulation. However, in the case of the National Commitment, the state created a fissure in its ability to regulate labor conditions as the Office of the Secretary General supported the granting of audit-approved social certificates to the very same production facilities that were penalized by the Public Prosecutor’s Office (MPT) for slave-like practices.

By tracing the historical conditions that led to the emergence of the National Commitment social certificate, I argue that certificate governance of Brazilian ethanol labor practices converted political struggle into flat criteria that were based on the impression of participatory consensus. Through this audit-based form of biofuel governance, the state attempted to move away from its role as law-maker and enforcer in favor of an experiment in mediation between industry and labor organizations that had a long and complex history of interaction and conflict. The resulting lack of de facto rights for workers and enforcement mechanisms under the National Commitment ultimately led to its ineffectiveness and termination. By situating this failed social justice instrument into the history of the three groups that came together in 2008–2009 to create the certificate—representatives from the Brazilian ethanol industry, social justice organizations, and the federal government under President Lula (and later Dilma)—I aim to show that emergent forms of neoliberal governance are products of long histories that coalesce around new geopolitical formations.

While scholarship on social justice in the ethanol industry has focused on social conditions, including on-the-ground labor conditions, food security, and impacts on subsistence farmers (e.g., articles in Borrás, Jr., et al., 2010a), this article analyzes a government–industry intervention that attempted to forestall such debates by creating a document that they contended could attest to social justice. Analyses of the increasingly prevalent certificate as a valid form of social governance in the biofuels sector are urgently required to understand its legitimation, implications, efficacy, and the conditions under which these governance mechanisms arise (cf. Hunsberger et al., 2014; Fortin and Richardson, 2013; Wilkinson and Herrera, 2010).

This paper mainly relies on primary source textual analysis, including the National Commitment itself, as well as various reports and publications from the Brazilian government, ethanol industry, and social organizations. I rely on secondary sources to retrace the histories of Brazilian ethanol and politics and draw upon interviews with members of the Brazilian Secretary General that were conducted in July 2012.³ Using these sources, this paper explores what happens when contemporary concerns for social justice in the context of the biofuel market expansion become incorporated into technocratic regulations of labor conditions that stem from decades-long interactions between the state, industry, and social justice organizations.

The paper begins by contextualizing the certificate through a brief explanation of labor in the sugarcane industry and by

² This trend can be seen in the European Commission (EC)’s recent approval of seven certification schemes to ensure the ethical integrity of imported ethanol (Kaminski, 2011). These include the RSB, which is the largest private biofuel certifier in the world, and Bonsucro, the scheme the EC had been using to guide decision making about ethanol importation. The RSB uses a system of twelve “principles and criteria” in assessment, including: “Legality, Human and Labor Rights, Local Development & Food Security, [and] Use of Hazardous Technologies” (RSB, nd). Bonsucro employs five principles in assessment: “1. Obey the law. 2. Respect human rights and labor standards. 3. Manage input, production and processing efficiencies to enhance sustainability. 4. Actively manage biodiversity and ecosystem services. 5. Continuously improve key areas of the business” (Bonsucro, 2012).

³ The names of informants have been anonymized.

explaining the terms of the certificate. I then explore the primary factors that led to the need for a mechanism to attest to social sustainability. The first of these factors resulted from investors and industrialists who wanted an exportable ethanol model to ensure that biofuel technologies that were developed in Brazil could be implemented in other nations of the global South in order to create a global biofuel market. The second factor was the move by the state and ethanol industry to quell global debates about biofuel sustainability, and together, these provoked an official response: the Dialogue Table. I then trace the intersecting histories that are required to understand the unique form the National Commitment took and the reasons it failed. I examine the historical trajectories of the three participating members of the National Commitment's Dialogue Table to show that neoliberal forms of governance emerge from long-term processes that coalesce around contemporary economic and geopolitical concerns. I conclude by arguing that through the National Commitment, the government attempted to position itself as a partner of industry-led governance instead of as the maker and enforcer of laws. This enabled the creators of the certificate to flatten labor issues into checklists and omit consequences for transgressions, creating a failed governance mechanism that even members of the cooperating social organizations later conceded was primarily “propaganda for the plantations” (Hashizume, 2013). I contend that this governmental experiment resulted from the historical nexus formed by the ethanol industry, social organizations, and the federal government in Brazil.

2. Contextualizing sugarcane labor conditions and the National Commitment certificate

For as long as sugarcane plantations have been documented, serious problems have been observed in the working and living conditions of their laborers. In contemporary Brazil, these problems include “the extortionate and degrading work conditions of sugarcane planting and harvesting, deaths by exhaustion in sugarcane plantations, payment for individual production, lack of workers’ control over the pay they receive, ... (and) precarious accommodation and transportation” (Lourenco and Bertani, 2011, 69).

Manual sugarcane harvesting techniques for producing sugar and ethanol involve 8–12 h of manual labor chopping stalks in direct sunlight with machetes and hauling cut cane to trucks for transport (Martinelli and Filoso, 2008). Exhaustion, over-exertion, high blood pressure, stress, machete accidents, and muscular injury are common for laborers. To make manual harvesting easier, the fields are burned prior to cutting, resulting in smoke and dust inhalation and an increased risk for pulmonary disease among sugarcane laborers. Fresh water, restrooms, and food storage are rarely available in the fields. Multiple work-related deaths on sugarcane plantations are reported each year.⁴

While the Brazilian sugarcane industry is beginning to eliminate hazardous working conditions by replacing a large workforce with expensive mechanized harvesters, dangerous conditions persist because laborers are still required to access crops grown on steep or rocky areas of the planting field. In addition, Brazilian government officials and industrialists seek to export ethanol production technologies to countries of the global South (see below); the use of manual labor is still required to deliver on promises of formal-sector employment growth that form an important component of the rhetoric of such technology transfer projects.

In the popular media, academic articles, and certain branches of the Brazilian government, manual labor conditions on sugarcane plantations are frequently referred to as “slave” or “slave-like.” The National Commitment social certificate was a mechanism intended to address such labor problems in the ethanol industry beyond an already-existing anti-slavery pact (see below) by publically rewarding businesses with good practices. The certificate was granted to companies that agreed to comply with its criteria following an independent audit and approval from a tripartite review board comprised of representatives from industry, social unions, and government.⁵ The certificate used five principles to organize the set of criteria on which the evaluation of plantations was based: providing protective equipment for workers; eliminating middlemen from the hiring and payment process; promoting literacy and raising the education level of laborers; promoting training and retraining of workers “with a view toward their productivity”; and strengthening social service practices in regions where migrant workers engage in seasonal labor (Secretary General, 2012a).

The tripartite certificate was the first of its kind in Brazil and was the result of seventeen meetings organized by President Lula’s Secretary General between July 2008 and the founding document’s signing in June 2009 (Secretary General, 2010).⁶ The federal government noted its novelty and progressive intent: “(it) is the result of a never seen before experiment in Brazil of a national tripartite dialogue and of negotiation—businessmen, workers, and the Federal Government—to face the challenge of providing decent labor in the context of an economic sector, sugar and ethanol” (Secretary General, 2010, 3). The Secretary General referred to this tripartite format as “the Dialogue Table” (or simply “the Table”), which was based on “confidence in democratic negotiation and the constant search for common denominators” (Secretary General, 2010, 1).⁷ Despite the dissolution of the National Commitment, the Secretary General’s office contends that the Dialogue Table still exists and will soon meet to discuss the creation of a new sugarcane labor pact (Hashizume, 2013).

At the Dialogue Table for the meetings that produced the National Commitment, the ethanol industry was represented by the Brazilian Sugarcane Industry Association (UNICA, which represents the majority of the country’s sugarcane ethanol producers) and the

⁵ The certificate used five accrediting auditing firms (General, 2011): three international firms, Deloitte Touche Tohmatsu, KPMG, and Ernst & Young, and two Brazilian firms, UHY Moreira and HLB Audilink. The international firms are all members of the “Big Four” audit firms (Big4, 2012). They are global “professional services networks” that provide membership to thousands of independent firms, which themselves provide auditing services (Deloitte Global Services Ltd., 2013; KPMG LLP, 2013; Ernst and Young Global Ltd., 2013). The member firms that conducted audits for the National Commitment were not specified. The two Brazilian firms that were awarded auditing contracts are Brazilian members of the international auditing networks UHY and HLB (UHY Moreira Auditores, 2013; Audilink Auditores, 2012).

⁶ In 2004, Brazil’s Agrarian Development Ministry introduced the Social Fuel Seal (*Selo Combustível Social*), which was given, along with tax exemptions, to biodiesel producers who contracted with family farmers for their fuel feedstock. The program received criticism for being more of a biofuel industry subsidy than a program to benefit small-scale farmers (Fernandes et al., 2010). Soy and animal protein continue to provide the majority of feedstock for biodiesel because family farmers are not able to produce high volumes of other feedstocks (Wilkinson and Herrera, 2010, 758). The “low level of productivity and deeper structural problems related to access to land, tired soils, lack of resources and technical assistance, the effects of rural exodus on labour availability, and indebtedness” have rendered this effort to integrate peasant agriculture into the biodiesel industry ineffective (Wilkinson and Herrera, 2010). The National Commitment differs in that it is applied directly to labor in industrial agriculture, and it was devised with contributions from social organizations, government, and industry. It is worth noting that another tripartite negotiation table occurred in Brasília in 2012 that resulted in the “National Commitment to Improve Working Conditions in the Construction Industry” (Secretary General, 2012b).

⁷ All literature produced by the Secretary General referred to the “Dialogue Table” and the “Table” as proper nouns, with each word capitalized. I retain the capitalization of these words to indicate my use of them as the terms used by the social actors at work here.

⁴ For more detailed accounts of labor conditions, see Alessi and Navarro, 1997; Hermele, 2011; and Carvalho Junior et al. 2012; and for a historical perspective, see Rogers, 2010.

National Forum for Sugar and Derived Energy; laborers were represented by the National Confederation of Agricultural Workers (CONTAG) and the Federation of Salaried Agricultural Workers of the State of São Paulo (FERAESP); and the Federal Government was represented by the Secretary General, Cabinet of the Chief of Staff, and five Ministry departments.⁸

The National Commitment existed alongside an economically effective accord that has done much to decrease slave-like conditions across sectors in Brazil, including the sugarcane and ethanol industry. The “National Pact for the Eradication of Slave Labor in Brazil,” jointly formed by industries and President Lula’s government in 2005, has enabled the Ministry of Labor and Employment (MTE) to bring several major lawsuits against sugarcane employers. This pact has been signed by over 300 companies and ensures that businesses that violate labor standards are placed on a “Dirty List,” which entails heavy fines, boycotts by pact-signing companies, and loan sanctions from federal and private banks (Ministry of Labor, 2008; BBC Online, 2012). Through the pact, the biofuel producer BRENCO was charged in 2008 with multiple labor condition violations by a public prosecutor in a high profile case, and in 2010, Brazil’s largest biofuel producer COSAN made headlines when several of its plantations were added to the Dirty List (Wilkinson and Herrera, 2010).

With this effective market-driven anti-slave labor accord in place, why did the Lula government implement the Dialogue Table and establish the National Commitment certificate? Furthermore, how did this tripartite certificate-creating Dialogue Table take the unique form that it did? The following sections address these questions.

3. International ethanol: Brazilian ethanol boosters respond to the biofuels debates

Since the early 2000s, Brazilian sugarcane industrialists have pursued two means of cultivating a global ethanol commodity market. One method has been through efforts to increase the scope and scale of the ethanol export market. Despite consistently exporting 2–3 billion liters of fuel per year, this was far below the level Brazilian industrialists desired (Valdes, 2011). In 2010, COSAN, Brazil’s largest producer of ethanol, signed an agreement with multinational oil company Royal Dutch Shell to merge their businesses in a new Brazilian venture called Raízen in the hopes of increasing their international profile. The deal was projected to generate \$21 billion per year in sales (Barreto, 2010). In 2011, the US lifted a long-standing tariff, and Brazilian ethanol imports quickly doubled and continue to grow (Crooks, 2012).

The other means of internationalization that Brazil has pursued is the introduction of ethanol production sites into other countries of the global South. Using the language of “South–South cooperation” and “sustainable development,” Brazilian investors and the Brazilian Development Bank (BNDES) have encouraged Southern countries to adopt the Brazilian biofuel model, largely through technology transfer agreements (Dauvergne and Neville, 2009, 1087; Borrás et al., 2010b; Franco et al., 2010). Alliances have been formed with India, China, Mozambique, Nigeria, South Africa, and other nations with the potential for agricultural growth and where boosters hope investments in land and technology will stimulate new ethanol markets, increase GDP, and promote energy security (Wolde-Georgis and Glantz, 2010; Barka and Mlambo, 2011). As previously mentioned, mechanized harvesting is largely replacing manual labor in Brazil. However, the social benefits promised by

these international biofuel transfers—most importantly social development through job creation—relies not on mechanized harvesting but on the perpetuation of manual harvesting, which uses dangerous and much-criticized practices.

The desire to expand the ethanol market through the exportation of fuel to Northern countries and production technologies to Southern countries coincided with the emergence of debates concerning the environmental and social sustainability of biofuels. Following increased investment and governmental subsidies for ethanol land acquisition and technological innovation in Brazil and the US, debates about the environmental and social sustainability of ethanol began to rage in US, European, and Brazilian academic institutions, the activist arena, the international media, and public discourse. The 2007 riots caused by the international food crisis prompted journalists to highlight biofuels as a key cause of the high food prices that sparked mass protests in Zimbabwe, Haiti, and other Southern countries (Dauvergne and Neville, 2009). Academics began to question the environmental and social impacts of biofuels, and the public acceptance of biofuel use in Northern countries—particularly the EU—began to dwindle. Even before the riots, nongovernmental conservation organizations such as the World Wildlife Fund (WWF) and BirdLife International were concerned that increased biofuel production would have effects on land use and biodiversity; after the food crisis peaked, environmental organizations called for more complete life cycle analyses of ethanol and questioned its impact on food prices (Dauvergne and Neville, 2009).

Four themes emerged in the biofuel literature that can be identified as key issues: the environmental impact of ethanol production, its ability to provide energy security, its impacts on social justice, and competition between food and fuel.⁹ Critics marshalled evidence in each debate arena that posed challenges to government and industry depictions of the biofuel industry as a viable solution to global warming, energy security, and rural development.

However, the Brazilian ethanol industry was able to weather this controversy. The first two sets of concerns—surrounding environmental impact and energy yield—were abated by reports and statistics produced by Brazilian scientists that showed a positive net energy gain for sugarcane ethanol production and use.¹⁰ Because of the higher energy yield of sugarcane ethanol versus corn (US) or rapeseed (EU) ethanol, scientists were able to argue that “ethanol from sugarcane is one of the most promising biofuels because its energetic balance is generally positive, meaning that the growing sugarcane absorbs more carbon than is emitted when the ethanol is burned as fuel” (Martinelli and Filoso, 2008, 885). Industry organizations, such as UNICA, used these statistics in publicity campaigns, and the Brazilian government’s website described the nation’s fuel as “the best and most advanced option for the large-scale production of sustainable biofuels in the world” (Brasil.gov.br, 2010). In 2008, then-president Lula jokingly compared sugarcane and corn ethanol, stating, “That is why certain people compare

⁹ For accounts of the environmental debates, see: (Martinelli and Filoso, 2008; White and Dasgupta, 2010; Wilkinson and Herrera, 2010). For accounts of the energy debates, see: (White and Dasgupta, 2010; Levidow and Paul, 2010; Matsuoka et al., 2009). For accounts of the social justice debates, see: (Franco et al., 2010; Hollander, 2010; Levidow and Paul, 2010; Hermele, 2011; Fernandes et al., 2010; Wilkinson and Herrera, 2010; Dauvergne and Neville, 2009; Borrás et al., 2010). For accounts of the food versus fuel debates, see: (Shattuck et al., 2009; Rosillo-Calle and Johnson, 2010; Smith, 2010; Partzsch, 2011).

¹⁰ This designation is not without contestation. Authors against biofuel programs use scientific fact to produce counter-narratives depicting the unsustainability of ethanol based on alternative assessments of ethanol’s energy impact (e.g. Pimentel and Patzek, 2006). Controversy surrounding net energy calculations and the life-cycle GHG models on which they are based have been particularly heated in the indirect land use change (ILUC) debates (e.g. Pimentel and Patzek, 2006; Fargione et al., 2010; Lapola et al., 2010; Bailis and Baka, 2011).

⁸ These were the Ministry of Labor and Employment (MTE), Ministry of Agriculture, Livestock and Supplies (MAPA), Ministry of Agrarian Development (MDA), Ministry of Education and Culture (MEC), and Ministry for Social Development and Combat of Hunger (MDS). The Ministry of Health (MS) joined in 2011.

ethanol to cholesterol ... there is good ethanol and bad ethanol" (da Silva, 2008; Dauvergne and Neville, 2009).¹¹

As Zimmerer (2011) argues, Brazil was already observed as a leader in global sustainability efforts because of the UN Conference on Environment and Development that was held in Rio de Janeiro in 1992 and the large-scale neoliberal conservation-development projects initiated in the 1990s (82, 97). Combined with Brazil's successful history of ethanol production and use, Brazil's status as a leader in sustainability allowed scientific data supporting the environmental sustainability and energy yield of Brazilian ethanol to be widely accepted. While not uncontested, multiple influential analyses of the Brazilian ethanol program have come to understand the program as an environmentally "special case," and this designation has afforded several benefits: the World Bank, the Organization for Economic Co-operation and Development (OECD), and the Food and Agriculture Organization (FAO) have exempted Brazil's ethanol program from critiques because of its alleged economic efficiency, its contribution to GHG reduction, and its nonimpact on world food prices (Wilkinson and Herrera, 2010).¹²

In addition to producing this scientific discourse, the Brazilian ethanol industry initiated a public relations campaign to combat criticism. UNICA launched an English-language website and released a series of English-language short films on YouTube that portrayed the production of sugarcane ethanol as an innocuous agricultural process, with clean, orderly workers taking lunch breaks and performing stretching exercises (Sweeter Alternative, 2010). These and similar efforts were meant to publicize the "social sustainability" of Brazil's ethanol program.

However, concurrent with these efforts to depict sugarcane ethanol as environmentally and socially beneficial, governmental and industry representatives sought a way for social justice regulation and standardization to accompany Brazilian capital and technology exports and provide legitimacy to the industry amid perceptions by consumers that Brazilian sugarcane ethanol production required "slave-like" labor. Creating international confidence in the social conditions necessary to produce ethanol required novel forms of verification and accountability that were broadly recognized because the Ministry of Labor's "Dirty List" was a justice mechanism rooted in specifically Brazilian economic and political institutions. In an era of neoliberal governance, the certificate has become a primary mechanism for the transfer of such social standards. Using a metaphor of travel to describe Brazilian aspirations, Wilkinson and Herrera (2010) claimed that it was "hoped that certification will provide the passport to global market access."

In most cases, certificates create a zone of regulation that bypasses state intervention through the implementation of an industry funded and determined audit system. As noted above, private ethanol certificate schemes have emerged that use external auditing firms to attest to the complying company's environmental and/or social practices. Scholarly research has taken multiple angles in assessing the success, viability, and efficacy of audit-based certificate and assurance governance schemes as mechanisms for ensuring corporate social responsibility (CSR). While certain authors have argued that audit-based certification programs advance CSR (e.g., Gilbert et al., 2010), others have contended that it is an imperfect system in need of evaluation or reform (e.g., Adams, 2004; Mueller et al., 2009). Others have questioned whether the

accountability projected through these mechanisms is illusory (e.g., Boiral and Gendron, 2011; Perego and Kolk, 2012) or even counterproductive to efforts to promote fair environmental and social practices (e.g., Cooper and Owen, 2007; Egels-Zandén and Hyllman, 2007). Theorists have analyzed how audit-based mechanisms aimed at economic efficiency and ethical practice have resulted in a shift in meanings and loci of accountability (e.g., Strathern, 2000). It is broadly acknowledged, however, that economically driven audit-based governance is increasingly used as an enforcement mechanism in relation to CSR outside of state strictures and consequences.

Third-party certification services have proliferated across sectors, taking myriad forms and promoting numerous standards and metrics of assessment. While a few certification schemes incorporate feedback from nongovernmental organizations (NGOs) (Wilburn, 2009), non-industry entities rarely play a role in enforcement and penalty administration. What made the National Commitment unique among certification programs was its experimental tripartite format, incorporating government, social justice organizations, and businesses into its design and implementation as well as in the awarding of certificates following an external audit.

The tense academic and activist input into the biofuel debates shaped a political climate in which complex scientific and social public relations efforts were increasingly required to support notions of "sustainability" in the international imagination. Brazil's internationalization of its homegrown technological innovations provided a strong motivation for the development of an exportable social certificate that could accompany ethanol technologies as part of an entire sustainable ethanol production system. The Lula government's mission to change international perceptions of biofuels materialized as the Dialogue Table, which became the forum through which the National Commitment certificate was developed and implemented. Selecting an auditable certificate to bring industry, social justice organizations, and the state into mediated dialogue indicates a historically conditioned confluence of differing principles held by these actors.

4. The makings of a failed certificate: intersecting histories of Brazilian sugarcane ethanol

With the implementation of the National Pact for the Eradication of Slave Labor in Brazil and the successful scientific and social public relations campaigns in place to ameliorate perceptions of the ethanol industry, questions remain as to why the Secretary General's office decided to collaborate on a social certificate with industry and social organization representatives when it could have (1) created or strengthened a set of laws that would demand a level of labor justice for ethanol-producing plantations or (2) required the sugarcane industry to create an audit-certificate program to monitor and reward their own complying businesses.

The answer to these questions lies in the intersecting histories of the participants in the Dialogue Table in the context of sugar and ethanol production: the ethanol industry, social justice organizations, and the Lula government. Understanding the interactions between these groups reveals why this governance mechanism was implemented and what ultimately made it an ineffective strategy for governing sugarcane labor practices. It also shows the contextual and historical roots of seemingly global neoliberal policies.

The ethanol industry's relationship with the federal government and the country's socio-political history converged around new desires for international expansion and legitimacy. This resulted in a form of labor governance that appeared to address slave-like labor conditions through an industry mechanism that used external verification. This reliance on independent auditors

¹¹ For examples of scientific discourse comparing sugarcane and corn ethanol in English, see Al-Riffai et al., 2010; McLoughlin, 2011. For examples from the Brazilian government and ethanol firms, see Brasil.gov.br, 2010; Gasol, 2012; Raizen, 2011; Medeiros, 2011.

¹² Brazilian sugarcane can be made into either food (sugar) or fuel (ethanol) depending on relative prices and demand. Additionally, less land is required to grow sufficient crops for fuel production because of sugarcane's high productivity, yield, and energy balance, as compared to corn or rapeseed. Impact on food prices has been more of a concern for corn ethanol and biodiesel production.

allowed the model to be exportable to other countries, unlike the National Pact for the Eradication of Slave Labor, which was rooted in a Brazilian system of financial and government sanctions and did not publically incorporate industry and social justice organizations into its formulation. However, the efficacy of the newly devised ethanol certificate was undermined by its creation of privileges from de facto rights, its lack of consequences, and the government's attempt to shift its role from enforcer to arbiter. Profiled histories of each set of actors reveal how this neoliberal formation was taken up by the government as a mediation experiment in biofuel governance and how it ultimately failed.

4.1. The ethanol industry

Industrial promotion of sugarcane technologies has played a vital role in the government's actions regarding ethanol regulation from the earliest uses of the fuel in Brazil. Plantation operators began experimenting with sugarcane ethanol as a fuel additive to gasoline in the first decades of the twentieth century. After several state mandates, the federal government instituted the first national blend mandate at five percent in 1931 and established the Sugar and Alcohol (Ethanol) Institute research center two years later (Matsuoka et al., 2009; Bernton et al., 1982; Kovarik, 1998). While cheap imported oil and pressure from oil companies in the following decades led to the revocation of the national mandate, surplus sugar was absorbed periodically through low level mandatory blending (Matsuoka et al., 2009).

In 1973, the military government initiated the National Alcohol (Ethanol) Program, commonly called *Proálcool*, in an effort to generate a regulated ethanol market that would guarantee the fuel's adoption. National ethanol mandates were put into effect at 20–25%, supply at gas stations was made compulsory, and a range of industry subsidies were provided (Wilkinson and Herrera, 2010). Although commonly understood as a reaction to increased imported oil prices resulting from the 1973 energy crisis, this was not the only factor in the implementation of this federally supported subsidy-mandate program.

The global agricultural-industrial Green Revolution of the 1960s and 1970s laid the groundwork for the need to use surplus sugar in Brazil. Rogers (2010) situates the 1970s sugarcane boom in the context of the international transformation of agricultural technologies and techniques, brought on by increased investment and technology transfer. This process of modernization resulted in increased yields prior to the energy crisis which were then bolstered by the *Proálcool* program. A dramatic decline in sugar prices in the mid-1970s resulting from overproduction further stimulated the government's response to accommodate surplus sugar (Matsuoka et al., 2009).

The continued increase in ethanol consumption in the late 1970s and 1980s was supported by subsidies to both the sugar and automobile industries. Cars were developed and produced that ran entirely on ethanol; by 1986, 90% of all new car sales in Brazil were ethanol-run vehicles (Wilkinson and Herrera, 2010). A drop in oil prices in the late 1980s led to a decline in the use of ethanol in Brazil, and through the early 1990s ethanol vehicle sales remained low. This coincided with a decade-long process of government deregulation of the sugar and ethanol industry. In this climate of neoliberalization, the Brazilian Sugarcane Industry Association (UNICA), Brazil's largest sugar lobbying organization, was founded in 1997. UNICA currently represents over half of all sugar and ethanol producers in the country (UNICA, 2012). Ethanol production began to grow during this time of early deregulation.

Technological innovation by the Brazilian automobile industry in the early 2000s caused a renewed public enthusiasm for ethanol. Flex-fuel cars, introduced in 2003, allowed consumers to select when to run their cars on 100% ethanol, 100% gasoline, or any

blend depending on relative prices. In 2008, the federal government ended subsidies for ethanol production because costs were low enough that it no longer required governmental assistance¹³ (Matsuoka et al., 2009; Wilkinson and Herrera, 2010). Despite this recent lowering of support, government subsidies and blend mandates from the early industrial experiments with ethanol facilitated the development of Brazil's large-scale biofuel economy and its status as a biofuel industry leader. It followed that the state would intervene on the industry's behalf by coordinating a forum for the creation of an exportable social certificate for ethanol producers.

4.2. Social justice organizations

The success of the ethanol program beginning in the 1920s aided the expansion of sugarcane plantations into Brazil's central growing region. Historically, sugarcane harvesting techniques required to produce ethanol have been extremely labor-intensive and often dangerous. Labor activism in the sugarcane sector has taken multiple forms in recent history. Here, I will focus on the two labor unions directly involved in the National Commitment: CONTAG, the largest national agricultural laborers' union, and the Federation of Salaried Agricultural Workers of the State of São Paulo (FERAESP). I will also discuss the Landless Workers Movement (MST), a broad and autonomous social movement that has eschewed traditional politics in favor of more radical tactics, which played an indirect role through their criticism of the formation and implementation of this certificate.

Scholarly accounts of Brazilian worker activism organizations have argued that a bifurcation of the labor rights movement occurred in the 1990s, with political ramifications that persist today. In the 1940s and 1950s, national-level agricultural labor unions that sought a minimum wage, breaks from work, and notice in case of dismissal were formed with the support of the Brazilian Communist Party (PCB). In 1963, just a year before the military coup that began the twenty-year-long dictatorship, the left-leaning federal government supported the consolidation of these unions into one organization, CONTAG (Welch, 2006). The military regime used CONTAG to extend its rule in the countryside by relying on the organization to deliver social services to agricultural laborers. Although the dictatorship's tactics weakened the political capacities of the organization, CONTAG used its state-sanctioned influence to bolster its membership base and to educate and provide assistance to rural workers beyond the purview of the PCB (Welch, 2009; Medeiros, 2007). With the rise of the Workers' Party (PT) and after the fall of the dictatorship in the 1980s, center-left organizations such as CONTAG enjoyed a formidable social and political presence and were able to place their core demands on the national agenda (Sandoval, 2007; Houtzager, 2001). In 1989, several small unions from São Paulo, the state with the largest sugarcane ethanol labor force, united to form a new trade union—FERAESP.

Throughout the 1990s, however, official policies of neoliberalization and market-led agrarian reform undermined the political efficacy of traditional labor unions, allowing less politically oriented, "direct-action" organizations to gain leverage (Medeiros, 2007; Pereira, 2003; Sandoval, 2007). This effectively split the social justice arena into two groups: traditional confederations such as CONTAG and FERAESP that are law-abiding and cooperate with the state to benefit its members (mostly small-scale farmers and formal wagedworkers) and newer organizations such as MST that represent mostly informal laborers and oppose state policies and practices through activist interventions (Sandoval, 2007; Fernandes et al., 2010).

¹³ It should be noted that subsidies to the sugar industry and ethanol producers remain in the form of tax credits, low interest loans, and blend mandates.

Since the 1990s, CONTAG has participated in governmental and World Bank-led forums and programs aimed at market-led agrarian reforms (Medeiros, 2007), and in 2006, FERAESP signed an accord with UNICA in an attempt to promote “best-practices” in the industry (Jank and Neves, 2008). MST has challenged neoliberal policies by mobilizing its broad and diverse support base and relying on its lack of affiliation and willingness to defy laws through occupations, encampments, and rallies. When the Secretary General set out to establish an industry–government–social organization committee to create an ethanol social certificate that could publically demonstrate the state-mediated cooperation of industry and social organizations, it contacted CONTAG and FERAESP to represent sugarcane laborers. MST opposed the Dialogue Table from the start and was outspokenly critical of the National Commitment throughout its existence.

4.3. The Lula federal government

From 1964 to 1985, Brazil's authoritarian military regime deployed brutal tactics against dissidents, stifled free speech through imprisonment and censorship, and destabilized the economy after the economic “Brazilian Miracle” of the 1970s. Many current government officials were critical of this regime and were ideologically affected by its oppression.¹⁴

Lula, an auto worker union leader during the dictatorship and a founding member of Brazil's leftist Workers Party (PT), made efforts throughout his two-term presidency (2003–2010) to incorporate the desires of state-sanctioned social movements into national politics. Through their commitment to unions and social politics, nationally represented social organizations, such as CONTAG, have come to be seen as representative of a broad and diverse “civil society” comprised largely of the laboring class. Thus, in an era of economy-driven governance practices, national political leaders who experienced the oppressiveness of the dictatorship have worked to uphold both leftist principles that value civil society and fiscal principles that seek to implement market-based models for governance to optimize market conditions. A member of the Secretary General's staff informed me that President Lula resolved these differing imperatives by attempting to “integrate the social movement into the very definition of politics” (Interview BSG-17-7, 2012).

When it came to devising labor regulations for the internationally expanding ethanol industry, the state called on national social movements to send representatives to Brasília to participate in an experimental “Dialogue Table.” This literal and metaphorical space that extended across time used a tripartite model in which social organizations acted as homogenizing proxies for diverse arenas of civil society. This resulted in the appearance of broad representation in governmental negotiations at the Table. However, the state attempted to create a new role for itself in relation to the other organizations, as it facilitated and sanctioned an experimental governance mechanism that abnegated the state's responsibility to enforce fair labor practices. Although the National Pact for the Eradication of Slave Labor was still in place as a way to punish offending businesses, the National Commitment sought to shift the federal government's role away from enforcer to arbiter, with external auditors called upon to verify a state-sanctioned certification scheme. Thus, the state effectively partnered with industry to endorse an instrument of social justice that took the form of a CSR certificate—a tool by and for corporations. This economy-driven mechanism of governance simultaneously attempted to protect laborers by improving conditions and to stimulate economic

activity through the industry's internalization of ethics, ultimately resulting in gross violations of fair labor practices while promoting the image of the ethanol industry as socially responsible.

This unique state-designed but not enforced certification scheme was a result of (1) the industry–government cooperation that enabled Brazil's ethanol economy, (2) the entrenchment of officially sanctioned social organizations in national politics, and (3) left-leaning government leaders who sought to implement fiscally driven government policies. They coalesced around the need for an exportable form of external verification to aid in the development of an international market for the production and sale of a contentious biofuel.

5. “Our Lulismo:” the Dialogue Table as mechanism for experimental governance

As noted above, the Dialogue Table led to the National Commitment certificate, which ethanol companies were encouraged to acquire and maintain. The implementation of a certificate system typically means that a state does not necessarily need to create or enforce laws that require businesses to act in certain equitable ways towards workers; it can instead choose to accept or deny the products or services these businesses offer based on compliance. In the case of the National Commitment, businesses that were supported by state infrastructure chose whether to commit to upholding the criteria of ethical standards as defined by the certificate. Government and industry representatives could contend that they reached these criteria in accordance with the desires of marginalized workers because their representatives were brought to the Table. Supported by the Lula administration and founded on the tenet that social justice must be incorporated into the structure of politics, these dialogue-based negotiations relied on beliefs in the efficacy of conversation, civility, and inclusion over both state-based regulation and political dissent.

While the “ensuring state” is responsible for guaranteeing that the public good is realized by private entities providing services (Schuppert, 2004; Giddens, 2011), the dialogue-promoting state supervises and contributes to negotiations between private entities and a narrowly-conceived civil society, and thus abnegates responsibility for protecting the rights of laborers. During the time that it was understood as a legitimate mechanism of social justice, the Dialogue Table realized the neoliberal ethic of reducing dissent through the conversion of political issues into collaboratively realized certificate criteria. The desires of each group at the Table appeared to be served: industries were brought into collaborative dialogue with dissenting workers and were shielded from criticism for bad practices because they had agreed to come to the Dialogue Table; social organization representatives contributed to negotiations that they hoped would result in better livelihoods for laborers; and the state fulfilled its role as an arbiter of politics and a promoter of market-based biofuel governance mechanisms.

However, the use of an audit-based certificate as a state-sponsored instrument for social justice flattened political concerns into criteria and did not create enforceable means of punishing violating businesses except by threat of removal from a list of National Commitment compliant companies. The result was an ineffective labor governance mechanism. No companies were ever removed from the list for labor violations, and companies that had been convicted of promoting slave-like labor practices by the Ministry of Labor (MTE) were then granted certificates following independent audits, which the Public Prosecutor's Office (MPT) later found to be unchecked, misrepresented, and even falsified (Hashizume, 2012). While a UNICA leader accurately asserted that there was technically “no correlation between the . . . (investigative) actions of the Ministry of Labor and the granting of the seal” (Rodrigues, 2012), the discrepancy between the Ministry of Labor's condemna-

¹⁴ Current President Dilma Rousseff, also of the PT, was a member of leftist guerilla groups that fought against the dictatorship during the 1960s and 1970s. Dilma was imprisoned and tortured from 1970 to 1972 for political dissidence.

tion and the Secretary General's endorsement indicates a fissure in the state's ability to regulate labor conditions. As the Secretary General publically supported the granting of the National Commitment certificate to businesses following private audits, the Ministry of Labor was independently finding labor transgressions and prosecuting allegedly-compliant plantations. Thus, the certificate, as a state-sponsored neoliberal mechanism that relied on industry-funded external auditors, was unable to vouch for adherence to fair labor standards and practices because it provided no oversight or penalties.

When the state shifted from enforcer to business partner in audit-based labor regulation, the logic of certificate governance resulted in severe political consequences. Because compliance with certificates was private and voluntary, benefits to laborers through the fulfillment of criteria demands were delivered only if an employer chose to comply. These benefits were not *de facto* rights but privileges, with no guarantee from the state or other regulatory agent. The lack of consequences for certificate violations created lax compliance conditions, even by participating businesses, because the state was not able to intervene.

Had the National Commitment persisted as formalized dialogue, negotiation, and collaboration, it may have worked to reduce communication by eradicating dissent and debate in politics by absorbing them into the certificate. Antonio Lucas Filho, a union leader who represented CONTAG at the Dialogue Table, criticized the forum and the state's role after the certificate was abandoned:

At the end of the process, we had the feeling that we had been deceived. We were used so that mill owners could make more money... We believed and defended the agreement in the hope that it would be fulfilled, but lack of preparation, commitment, and effort by the government loosened it too much... If we were to return to the Dialogue Table today, we would demand much more. Especially action from the government, which left us alone. (quoted in Hashizume, 2013)

Filho contended that the state never upheld the position of the social organizations at the Table, instead using their presence to make the sugarcane industry's products more appealing. CONTAG's demands were not met, despite Filho's intentions to improve the working conditions of laborers; however, organizers could still claim that labor organizations were instrumental in creating the certificate. Any issues that were taken seriously at the Table became the unenforceable criteria of the certificate.

According to a member of the Secretary General, the Brazilian government was building "a new kind of welfare system, with respect for social movements, civil society, sustainability, and a focus on social development. This is our *Lulismo*" (Interview BSG-17-7, 2012). While *Lulismo* may attempt to incorporate social organizations and social sustainability into government practices, the National Commitment attempted to remove the state from its classical role as lawmaker and enforcer through an experimental governance mechanism. Its use of corporate-driven modes of governance resulted in an ineffective mechanism for protecting sugarcane laborers, despite its purpose to ensure social justice within a Brazilian ethanol production model that was planned for export to countries of the global South.

6. Conclusion

The biofuel debates that began in the early 2000s in conjunction with the desires of the Brazilian government and industry to extend the ethanol market and ethanol technologies to other countries of the global South created the need for a verifiable method of showing social justice in the industry. In 2008, the federal gov-

ernment built on its long-standing relationship with the ethanol industry to create a collaboratively realized audit-based certificate that was meant to ameliorate the unfair labor practices that social justice organizations had been decrying for decades. They hoped to produce a certifiable way to prove social justice domestically and abroad. However, the conversion of labor injustices into auditable, but ultimately unenforced checklist items also converted fair labor practices into privileges for workers that employers could choose to enforce and therefore these practices continued despite the certificate's implementation.

Through various means of biofuel governance beginning in the early twentieth century, the Brazilian state has sought to promote ethanol production, consumption, infrastructure, institutions, research, development, and, now, international development in the form of technology transfers. Labor practices and their regulation have long been sources of contention in Brazil, and current certificate forms of governance call into question the ability of the state to intervene on behalf of laborers, especially when this intervention does not promote the growth of businesses. Even the National Pact for the Eradication of Slave Labor, which has been effective at punishing companies that do not comply with its terms, depends on the publicization of a list of signatory businesses to remain successful. This pact uses governmental inspection to determine compliance, unlike the National Commitment which relied on independent auditors; however, the audit system is capable of obstructing rights and curtailing multiple political possibilities even as it may, in some instances, provide more equitable conditions for laborers on participating plantations.¹⁵

Fortin and Richardson (2013) argue that ethanol certification schemes may enable the scrutiny of large firms in scenarios involving land governance. In these situations, advocates of agrarian communities might be alerted to bad practices, corporate accountability of participating firms might be encouraged, and existing regulatory frameworks might be extended to strengthen land tenure security policies. However, the presence of both the state and social organizations in the development of the National Certificate legitimized its criteria beyond those that would be established solely by corporations, which is typical in self-regulatory certification schemes. In Brazil, an entirely new system of labor regulation and local-level monitoring would have to be implemented for scrutiny to be possible through state-sanctioned certificates.

In this paper, I have retraced the conditions that allowed a government–industry–NGO social certificate to emerge and then fail as a legitimate instrument for the governance of social justice in the Brazilian ethanol industry. I aim to contribute to critical analyses of new forms of certificate regulation in the biofuels sector that will play an increasingly important role in shaping social and environmental realities as biofuel production and use increases. Brazilian sugarcane plantations are sites where inequitable and dangerous labor conditions are common. As Brazil seeks to export its model of ethanol production to other countries in the global South, it is important to analyze the historical and political contexts of social governance schemes to try to determine their future path and the conditions under which they might fail. The National Commitment has shown that state-based neoliberal governance provides inadequate tools to ensure social justice. It failed to shield workers from practices that result from the prioritization of business interests, thus indicating the disjunctures between governmental and neoliberal social governance.

¹⁵ Though the National Commitment failed as an enforcement mechanism, it is impossible to say that no sugarcane laborers benefited from a plantation's compliance following an audit. Strathern (2000, 3) points out the difficulty in critiquing "audit cultures" in which regulation is monitored and/or enforced by independent auditors rather than states: "after all, [audit culture] advances values that academics generally hold dear, such as responsibility, openness about outcomes, and widening of access."

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